

Claims

1. (Currently Amended) A method for accessing a shared resource comprising:

a first station sharing a resource ~~between with~~ a plurality of other stations;
the first station determining a first backoff interval by measuring an average wait time
that ~~one of said plurality of stations~~ the first station incurred during a plurality of previous access
attempts to the shared resource; and

once it is determined that the ~~one of said plurality of stations~~ first station desires access to
the shared resource and the shared resource first becomes available, ~~preventing the one station~~
the first station refraining from contending for access to said shared resource for at least an
interval substantially equal to the first backoff interval.

2. (Currently Amended) The method of claim 1, further comprising the first station transmitting a
frame ~~from the one of said plurality of stations to another station to one of the other stations~~
using ~~said the~~ shared resource after said first backoff interval has passed, wherein said shared
resource is a shared-communications channel.

3. (Currently Amended) The method of claim 1, further comprising, after the first backoff period
is determined, the first station powering down a receiver circuit ~~in the one of said plurality of~~
~~stations~~ for at least a portion of said first backoff interval while the ~~one station is being prevented~~
first station is refraining from contending for access to the shared resource.

4. (Currently Amended) The method of claim 1, wherein said first backoff interval is further based on ~~at least one of:~~

- i) a moving average ~~;~~ and
- ii) ~~a contention window value.~~

5. (Currently Amended) The method of claim 1, ~~wherein~~ further comprising the first station is prevented refraining from contending for access to the shared resource for a second random backoff period beyond said first determined backoff period.

6. (Currently Amended) The method of claim 5, wherein said second random backoff period ~~can~~ assume assumes a nonzero value only after an unsuccessful attempt to transmit occurs.

7. (Previously Presented) The method of claim 1, wherein said backoff interval is constrained to be at least as long as an 802.11 distributed interframe space.

8. (Currently Amended) A method for accessing a shared resource comprising:

a first station sharing a resource ~~between with~~ a plurality of other stations;
the first station determining a first backoff interval by measuring an average wait time that ~~one of said plurality of stations~~ the first station incurred during a plurality of previous access attempts to the ~~share~~ shared resource;

once it is determined that the ~~one of said plurality of stations~~ first station desires access to the shared resource and the shared resource first becomes available, ~~preventing the one station~~

the first station refraining from contending for access to said shared resource for at least an interval substantially equal to said first backoff interval; and

after the first backoff period is determined, the first station powering down a receiver circuit ~~in the one of said plurality of stations~~ for at least a portion of said first backoff interval while ~~the one station is being prevented~~ first station is refraining from contending for access to the shared resource.

9. (Currently Amended) The method of claim 8, further comprising the first station transmitting a frame ~~from the one of said plurality of stations to another station to one of the other stations~~ using ~~said~~ the shared resource after said first backoff interval has passed, wherein said shared resource is a shared-communications channel.

10. (Currently Amended) The method of claim 8, wherein said first backoff interval is further based on at least one of:

- i) a moving average ~~+~~ and
- ii) ~~a contention window value.~~

11. (Currently Amended) The method of claim 8, ~~wherein the~~ further comprising the first station ~~is prevented~~ refraining from contending for access to the shared resource for a second random backoff period beyond said first backoff period.

12. (Currently Amended) The method of claim 11, wherein said second random backoff period ~~can assume~~ assumes a nonzero value only after an unsuccessful attempt to transmit occurs.

13. (Currently Amended) An apparatus comprising:

a transmitter for transmitting data over a shared resource; and

a processor configured to determine a first backoff interval by measuring an average wait time that the transmitter incurred during a plurality of previous attempts to access the shared resource and, once it is determined that the apparatus desires access to the shared resource and the shared resource first becomes available, to ~~prevent~~ cause the apparatus to refrain from contending for access to said shared resource for at least an interval substantially equal to the first backoff interval.

14. (Currently Amended) The apparatus of claim 13, further comprising a receiver for receiving data from the shared resource;

wherein the processor is configured to power down the receiver ~~is powered down~~ for at least a portion of said first backoff interval while the apparatus is ~~being prevented~~ refraining from contending for access to the shared resource.

15.-16. (Canceled)

17. (Currently Amended) The apparatus of claim 13, wherein said shared resource is a shared-communications channel and wherein said transmitter communicates over ~~said~~ the shared-communications channel in accordance with an IEEE 802.11 protocol.

18. (Currently Amended) A system comprising:

a station and an access point communicating over a shared resource, ~~said the~~ access point configured to:

determine a first backoff interval value by measuring an average wait time that the access point incurred during a plurality of previous attempts to access the shared resource; and

distribute the first backoff interval value to ~~one or more stations~~ the station [[:]] ,
~~said the~~ station configured to:

transmit data over said shared resource;

receive the first backoff interval value from said access point;

once it is determined that the station desires access to the shared resource and the shared resource first becomes available, refrain from contending for access to said shared resource for at least a first interval substantially equal to said first backoff interval value; and

power down a receiver circuit for at least a portion of said first interval while the station ~~is being prevented~~ refrains from accessing the shared resource [[:]] .

19.-20. (Canceled)

21. (Currently Amended) The ~~apparatus~~ system of claim 18, wherein the station ~~is prevented~~ refrains from contending for access to the shared resource for a second random backoff period beyond said first backoff period.

22. (Currently Amended) An apparatus comprising:

a means for transmitting data over a shared resource;

a means for determining a first backoff interval by measuring an average wait time that the means for transmitting incurred during a plurality of previous access attempts; and

a means for determining that the apparatus desires access to the shared resource and that the shared resource has first become available, and for ~~preventing causing the apparatus to~~ refrain from contending for access to said shared resource for at least an interval substantially equal to the first backoff interval.

23. (Currently Amended) The apparatus of claim 22, further comprising a means for, after the first backoff period is determined, powering down a receiving means for at least a portion of said first backoff interval while the apparatus ~~is being prevented~~ refrains from contending for access to the shared resource.

24. (Canceled)

25. (Currently Amended) The apparatus of claim 22, wherein said shared resource is a shared-communications channel and wherein said means for transmitting transmits over ~~said the~~ the shared-communications channel in accordance with an 802.11 protocol.

26. (Currently Amended) The method of claim 3, further comprising the first station powering down ~~the a~~ a transmitter circuit in the one of said plurality of stations for at least the same portion of said first backoff interval.

27. (Currently Amended) The apparatus of claim 14, wherein the processor is configured to power down the transmitter is ~~powered down~~ for at least the same portion of said first backoff interval.

Please add the following new claims:

28. (New) The method of claim 1, wherein the first station measuring an average wait time comprises:

the first station measuring a plurality of wait times, each wait time measured (i) from a time that the first station first determines that the shared resource has become idle (ii) to a time that the first station actually transmits a pending frame on the shared resource; and
calculating an average of the plurality of wait times.

29. (New) The method of claim 8, wherein the first station measuring an average wait time comprises:

the first station measuring a plurality of wait times, each wait time measured (i) from a time that the first station first determines that the shared resource has become idle (ii) to a time that the first station actually transmits a pending frame on the shared resource; and
calculating an average of the plurality of wait times.

30. (New) The apparatus of claim 13, wherein measuring an average wait time comprises:

the processor being configured to measure a plurality of wait times, each wait time measured (i) from a time that the processor first determines that the shared resource has become

idle (ii) to a time that the transmitter actually transmits a pending frame on the shared resource;
and

the processor being configured to calculate an average of the plurality of wait times.

31. (New) The system of claim 18, wherein measuring an average wait time comprises:

the access point being configured to measure a plurality of wait times, each wait time measured (i) from a time that the access point first determines that the shared resource has become idle (ii) to a time that the access point actually transmits a pending frame on the shared resource; and

the access point being configured to calculate an average of the plurality of wait times.

32 (New) The apparatus of claim 22, wherein measuring an average wait time comprises:

the means for determining measuring a plurality of wait times, each wait time measured (i) from a time that the apparatus first determines that the shared resource has become idle (ii) to a time that the apparatus actually transmits a pending frame on the shared resource; and
the means for determining calculating an average of the plurality of wait times.